Senate Bill 5X

Legislative Report

California Low-Income Home Energy Assistance Program (CAL LIHEAP)

Department of Community Services and Development

January 2002

Executive Summary

Governor Davis signed Senate Bill 5X (SB 5X) in April 2001, which appropriated $120 million to the Department of Community Services and Development (CSD) for the purposes of supplementing the federal Low-Income Home Energy Assistance Program (LIHEAP) and implementing the California Low-Income Home Energy Assistance Program (CAL LIHEAP). The goals of this program are to increase energy conservation, reduce the demand for energy services in low-income households (at or below 250% of the federal poverty guidelines) and assure that the most vulnerable households can cope with high energy costs.

CSD initially distributed $30 million of the $120 million to CSD's existing network of LIHEAP Service Providers to ensure that funds were available for immediate provision of services during the peak energy demand summer months of June, July and August 2001.

Because of the rapid expenditure rate of the CAL LIHEAP Service Providers and the increased demand for services by low-income clients during the energy crisis, CSD has distributed to date $62,653,257 (over one half of the total CAL LIHEAP appropriation) to its network although these funds were intended to be available in SB 5X until January 1, 2005. The following data represents the accomplishments of the program to date:

- A total of 57,116 low-income households have been assisted.
- 18,169 dwellings have been weatherized.
- More than 94,000 weatherization measures have been installed, including, but not limited to the replacement of inefficient refrigerators, and the installation of compact fluorescent lamps and electric water heaters.
- More than 3.6 million kilowatt-hours have been saved.
- 13,920 households in a crisis situation (e.g. utility shut-off notice) have received Energy Crisis Intervention Services.
- 25,027 households experiencing difficulty in paying their utility bill have received Cash Assistance Program payments.
- Over 70,000 vulnerable population individuals have been served; including the elderly, disabled, limited-English speaking, very young children and migrant and seasonal farmworkers.

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Background

In April 2001, Governor Davis signed Senate Bill 5X (SB 5X) which authorized the Department of Community Services and Development (CSD) to receive $120 million from the General Fund for the purposes of supplementing the federal Low-Income Home Energy Assistance Program (LIHEAP) and to implement a new California Low-Income Home Energy Assistance Program (CAL LIHEAP). The goals of this program are to increase energy conservation, reduce the demand for energy services in low-income households and assure that the most vulnerable households cope with high energy costs.

SB 5X established the CAL LIHEAP Program components of Weatherization and Conservation Services (WX), Energy Crisis Intervention Services (ECIS), and Cash Assistance Payments (CAP). Included in the bill was Governor Davis' line item veto message, which directed CSD to set aside $20 million of the $120 million appropriation for distribution only to local service providers located in areas that are serviced by Locally Owned Public Utilities (LOPU's).

Program Components

WX

The WX component consists of services to improve the energy efficiency of homes, including the installation of attic insulation, weatherstripping, minor housing repairs, and related energy conservation measures. The weatherization program encompasses a wide range of electric baseload, mandatory and optional measures identified to have the greatest impact on energy reduction. Weatherization services assist in reducing the demand for energy and continue to provide energy savings in the future.

CAP

The CAP component of the program consists of a gas and electric bill payment made on behalf of the client to the utility company to assist with the eligible households heating and cooling costs. This program also includes wood, propane and oil payments.

ECIS

The ECIS component of the program consists of gas and electric bill payments, wood, propane and oil payments, and furnace repair and replacement on behalf of those households identified in a crisis situation. An ECIS payment is made when an applicant receives a 24 or 48-hour disconnection notice or other utility service disconnection notice that would imply a life threatening and/or emergency situation; or the applicant's utility services have been terminated; or the applicant requires assistance with establishing a new energy account.

LOPU

The funds allocated for LOPU are to be used for energy bill payments only. These funds are set aside for the payment of energy bills only for clients whose energy supplier is identified in the CAL LIHEAP Contract as a LOPU in the contractor's service area.

Program Development and Design

In designing and developing CAL LIHEAP, CSD mirrored the federal LIHEAP program with some added flexibility not allowable under the federal program. SB 5X provides that eligibility for CAL LIHEAP services includes households with incomes that do not exceed 250% of the federal poverty level (FPL) for this state. The 250% income maximum enabled CSD to serve a larger population of households typically categorized as the "working poor." Those households do not qualify for assistance under the federal LIHEAP income guidelines of 60% of the state median income (SMI) (which equates approximately to 200% of the federal poverty level).

Listed below is a chart depicting the income differences in the CAL LIHEAP and federal LIHEAP Programs:

Number in Household	CAL LIHEAP 250% FPL Annual Income	Number in Household	LIHEAP 60% SMI Annual Income
1	$21,475	1	$17,225
2	$29,025	2	$22,525
3	$36,575	3	$27,825
4	$44,125	4	$33,125
5	$51,675	5	$38,425
6	$59,225	6	$43,725
7	$66,775	7	$44,719
8	$74,325	8	$45,713

Secondly, to increase the availability and impact of ECIS and CAP each service provider was asked to complete a local plan to determine the amount of funds to be allocated within the ECIS and CAP components of the contract, based on local determination and identified needs of the client population in their service areas. Additionally, the service providers were granted the flexibility of selecting the maximum benefit payable and the number of payments that each eligible household may receive. This allowed the service providers to meet the needs of those clients that were faced with exceptionally high utility bills and assured the household would receive sufficient assistance to alleviate their energy concerns.

Thirdly, to meet the intent of SB 5X, to immediately reduce energy consumption, CSD designed the WX component of CAL LIHEAP so that Electric Base Load (EBL) Measures would be the first priority for installation. EBL measures included:

 Refrigerator Replacement,

 Electric Water Heater Repair/Replacement,

 Microwave Oven Replacement/Installation

 Thread-based Compact Fluorescent Lamps, and

 Hard-Wired Compact Fluorescent Lamps.

 Funding Allocation, Distribution and Expenditures

To ensure the timely implementation of services and to begin the reduction of energy usage immediately, CSD distributed funds through our existing LIHEAP Local Service Providers comprised of forty-five local governmental and nonprofit organizations that provide services in all fifty-eight counties of California. The funds were allocated and distributed in phases as follows:

Phase 1A – Initially, $29,100,000 million was distributed to provide program services based on a three-factor-formula consisting of low-income population, climate and energy costs. The original contract term was June 1, 2001 through August 31, 2001 to ensure services were implemented during the peak summer months of June, July, and August.

Phase 1B– Less than six weeks into Phase 1A several CAL LIHEAP Local Service Providers notified CSD they had totally expended the initial cash assistance funds. To prevent a gap in services these agencies received a doubling of their initial Phase 1A allocation. Phase 1B total distribution was $12,787,932.

Phase 2A – The original contract term was extended for all service providers from August 31, 2001 to November 30, 2001. CAL LIHEAP funds were allocated to those agencies that had not previously received the doubling of their Phase 1A allocation. Total Phase 2A allocations were $15,768,502.

Phase 2B – Due to the high demand for assistance with utility payments CSD received additional requests from service providers that had totally expended their Phase 1A, 1B, and 2A cash assistance funds. These agencies had clients but no funds to provide services. To prevent a gap in service these agencies were allocated an additional 50% of their initial Phase 1A allocation. Total Phase 2B allocations were $4,156,823.

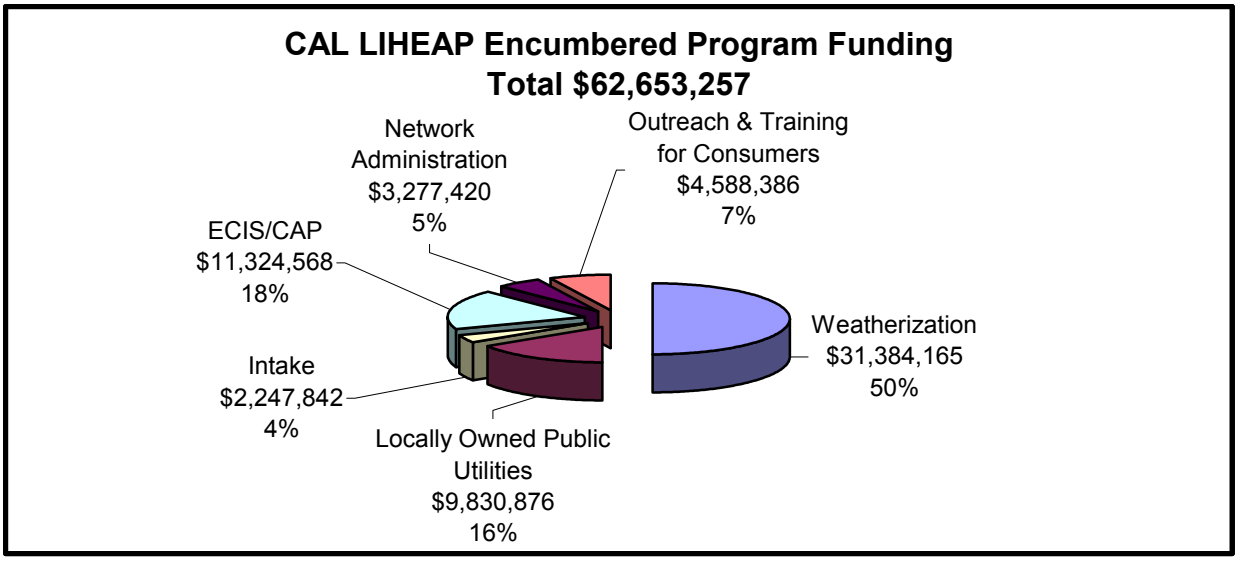
Phase 3 – All CAL LIHEAP contracts were extended to December 31, 2002.

In addition, $840,000 has been allocated for a Native American set-a-side.
SB 5X characterizes CAL LIHEAP as supplementing federal LIHEAP, and under federal LIHEAP, California Indian Tribes are provided a 0.7% set-aside from California's annual federal LIHEAP gross allotment.

Although not specifically identified as a vulnerable population in SB 5X, California Indian Tribes are recognized in Section 5(j) of SB 5X as a group that warrants special rules for access to specific SB 5X funds and various outreach requirements. It is CSD's belief that the insertion of the above-described provisions was a signal by the Legislature that California Indian Tribes should not be overlooked during the energy crisis.

Therefore, because of the existing federal LIHEAP practice to annually recognize the needs of this disadvantaged group, and the Section 5(j) language described above, CSD decided to mirror the federal program and award 0.7% ($840,000) of the total CAL LIHEAP funding to California Indian Tribes.

As shown in the following pie graph, from June 1, 2001 through October 31, 2001, CSD has allocated a total of $62,653,257 in contracts to CAL LIHEAP Local Service Providers. The amount of funding disbursed on the CAL LIHEAP Program is $56,381,912.



Program Activities

Outreach and Assistance to Vulnerable Populations

Energy assistance is important to all recipients, but with the energy crisis California faces, the vulnerable population groups are most adversely impacted. Senate Bill 5X identified the vulnerable populations to be served: elderly persons, disabled persons, limited-English-speaking persons, migrant and seasonal farmworkers, and households with very young children. Additionally, Senate Bill 5X requires CSD to ensure that vulnerable populations have comparable access to the energy programs. CAL LIHEAP Local Service Providers are required to conduct special outreach to vulnerable households, including outreach to senior centers, independent living centers, welfare departments, regional centers, and to migrant and seasonal farmworkers. Outreach activities included: flyers, brochures, outreach mailers to target populations, and/or public announcements.

Intake

CAL LIHEAP Local Service Providers are required to conduct client intake and assessment for all persons seeking CAL LIHEAP services. Prior to the intake process, a pre-screening of customers, either via the telephone or in person, occurs to determine eligibility. After eligibility is determined applicable documentation needed to assist the client is collected. Once the documentation is verified and the household has been determined to be eligible for assistance, the application is forwarded to CSD for payment. The intake process for CAP and ECIS is completed through an automated system.

Conservation Services (Training for Consumers)

SB 5X requires that CAL LIHEAP Local Service Providers provide all recipients of energy assistance with energy conservation education information and budget counseling that includes the following:

- Information regarding the importance of applying for energy assistance prior to being in an arrearage situation and information concerning various utility company budget payment plan(s).
- Written information that describes energy-saving behavioral adjustments that will decrease the energy consumption of the household.
- Resource information, referrals to other energy programs, and family and budget counseling in order to assist clients in achieving self-sufficiency.
- A description of the benefits that the client can expect to receive as a result of the weatherization measures and the purposes and functions of each measure installed in the dwelling.

Estimated Impact of Funds on Energy Demand

Reporting Requirements

In an effort to quantify the impact CAL LIHEAP WX services (installation of measures) have on the reduction of low-income customer energy demand, CSD contracted with Richard Heath and Associates (RHA). CSD with the aid of RHA and in consultation with the CAL LIHEAP Local Service Providers developed programmatic guidelines and protocols including policies and procedures, material and installation standards and a comprehensive data collection and analysis tool to analyze the impact of CAL LIHEAP services on energy demand.

To assist in gathering necessary data CAL LIHEAP Local Service Providers were provided data collection and reporting tools to capture and report monthly per-dwelling client energy usage demographics, and information on weatherization activities completed using CAL LIHEAP funds. Data for the months of June through October 2001 was summarized and energy savings calculations estimated using existing models developed by California investor-owned utilities and the California Energy Commission (CEC).

The following analysis is part of a larger report prepared by RHA for CSD. This report presents the analysis and projected energy savings derived with data collected from thirty-two of the forty-five service providers participating in the CAL LIHEAP program.

The CAL LIHEAP Local Service Providers preliminary efforts were focused on implementing and providing assistance to the clients and fulfilling the programmatic contractual obligations. This created an initial administrative backlog in reporting to RHA. The service providers are required to report monthly to CSD their administrative expenditures and programmatic data, and prepare and submit a separate report to RHA. The data submitted to RHA is extremely detailed and is captured per dwelling and measure installed in order to accurately calculate the reduction of peak electricity demand and improvement in energy efficiency. Furthermore, several of the service providers WX programs are not completely automated and the data is compiled and reported manually to RHA. Thus, there is a discrepancy in the number of service providers' data contained in this report and the actual number of agencies providing CAL LIHEAP services. However, the agencies are urgently working on completing the reports and will be submitting them as soon as possible. CSD anticipates that future legislative reports will reflect the full breadth of the impact of services provided by all CAL LIHEAP Local Service Providers.

Installation of Measures

To rapidly and effectively increase energy conservation and reduce demand for energy, CSD developed and implemented the CAL LIHEAP Weatherization Program, which focused its efforts towards this goal. This energy efficiency program embraced measures that have the greatest impact on peak demand reduction. The five (5) measures listed below were identified and given the highest priority for installation as they afforded the greatest potential for energy usage reduction:

- **Refrigerator Replacement**
- **Electric Water Heater Repair/Replacement**
- **Microwave Oven Replacement/Installation**
- **Thread-based Compact Fluorescent Lamps**
- **Hard-Wired Compact Fluorescent Lamps**

This group of measures was entitled "Electric Base Load Measures." The backbone of a successful installation program is a set of up-to-date material and installation standards, as there exists a direct correlation between correct installation and measure effectiveness. To this end CSD developed and distributed, to its CAL LIHEAP Local Service Providers, "Electric Base Load Measures Material and Installation Standards" consistent with 1) new statewide Low Income Energy Efficiency (LIEE) Program standards, 2) newly-updated Title 24 Residential Building Energy Efficiency Standards, and 3) current California building codes, mechanical codes, and electrical codes.

Likewise, fundamental to a successful retrofit installation program are technical and programmatic policies and procedures. Measure-specific policies and procedures for the five (5) Electric Base Load Measures were developed and disseminated to CAL LIHEAP Local Service Providers to supplement CSD's administrative policies.

Assumptions

To maintain consistency between all statewide weatherization programs and utility low-income energy efficient programs, a review of current data collection strategies, reporting formats, and assumptions used by California investor-owned utilities was performed. The information gathered was incorporated into CSD's data collection and reporting protocol. Data for the months of June through October 2001 was summarized and energy savings calculations estimated using existing models developed by California investor-owned utilities and the California Energy Commission (CEC).

Since CAL LIHEAP is a statewide program, its service territory traverses multiple climate zones and includes customers from the four major investor-owned utilities. In order to apply the per measure energy impacts currently being used by the utilities and CSD to ascertain energy savings derived from installation of measures, each CAL LIHEAP Service Provider was assigned a CEC Forecasting Climate Zone that correlated with the utility in whose service area the agency performs weatherization services. Appendix A contains a map of California Energy Commission Forecasting Climate Zones and a list of the 45 Service Providers with their corresponding CEC Forecasting Climate Zone.

Included in Appendix B is a list of weatherization measures currently being installed using CAL LIHEAP funds along with their projected yearly energy impact in kilowatt hour savings (kWhs) and therms. The list is grouped into three categories: Weatherization Activities, Mandatory Measures (including the "Electric Base Load Measures"), and Optional Measures. Under Optional Measures only the top five (5) most frequently installed measures were included, the remainder of the Optional Measures were grouped under Other Optional Measures. These include a miscellaneous group of measures installed by the CAL LIHEAP Service Providers in the months of June through October.

The list also contains weatherization activities and measures, which are performed as either a prerequisite to installing a weatherization measure or to mitigate a potential health and safety hazard. The following three (3) measures have little or no energy savings associated with them: Combustion Appliance Safety Hazard Repair/ Replacement, Attic Venting and Electric Water Heater Repair.

Data Collection

To assist in gathering necessary data CAL LIHEAP Service Providers were supplied data collection and reporting tools to capture and report monthly per-dwelling client energy usage demographics, and information on weatherization activities completed using CAL LIHEAP funds. These monthly weatherization activity reports are being collected and compiled into a database by RHA.

To-date 114 data collection reports for the months of June through October have been analyzed; these reports comprise a total of 10,201 weatherized low-income dwellings

consisting of Single Family, Mobile, and Multifamily homes. Results of the analysis are presented in the following sections. See Appendix C for the number of homes weatherized and the estimated yearly energy savings per CAL LIHEAP Service Provider.

Measures Installed

This section provides a summary of CAL LIHEAP weatherization measures installed in the months of June through October 2001. Only those measures, which were established to have an energy impact, are included in the chart on the next page (unit of measure is per dwelling unless otherwise specified).

CAL LIHEAP WX Measures Installed-June through October 2001

	MANDATORY MEASURES	Quantity
1	Glass Replacement	724
2	Duct and Register Repair/Replacement	261
3	Minor Envelope Repair	3,005
4	Evap. Cooler/Air Conditioner Vent Cover	401
5	a. Ceiling Insulation R11	101
	c. Ceiling Insulation R19	157
	e. Ceiling Insulation R30	81
	f. Ceiling Insulation R38	66
6	Low-Flow Showerhead, per device	3,119
7	Hot Water Faucet Restrictor, per device	5,646
8	Door Weatherstripping, per door	4,600
9	Water Heater Blanket	718
10	Water Heater Pipe Wrap	271
11	Duct Wrap	15
12	Switch/Outlet Gaskets	2,434
13	Caulking	2,428
14	Other Weatherstripping	831
	Total Mandatory Measures	24,858
15	Electric Base Load Measures	
	a. Refrigerator Replacement	5,069
	b. Electric Water Heater Repair/Replacement	69
	c. Microwave Oven	6,255
	d. Thread-based Compact Fluorescent Lamps	19,776
	e. Hard-Wired Compact Fluorescent Lamps	396
	Total Electric Base Load Measures	31,565
	OPTIONAL MEASURES	
1	Ceiling Fans	583
2	Evaporative Cooler Repair	74
3	Filter Replacement for A/C or Furnace, Filters Only	581
4	Filter Replacement for A/C or Furnace, Filters + Replacement Signal	314
5	Setback Thermostat, per dwelling	970
6	Other Optional Measures	493
	Total Optional Measures	3,015
	TOTAL CAL LIHEAP WX MEASURES INSTALLED	59,438

Table 1: CAL LIHEAP Weatherization Measures Installed

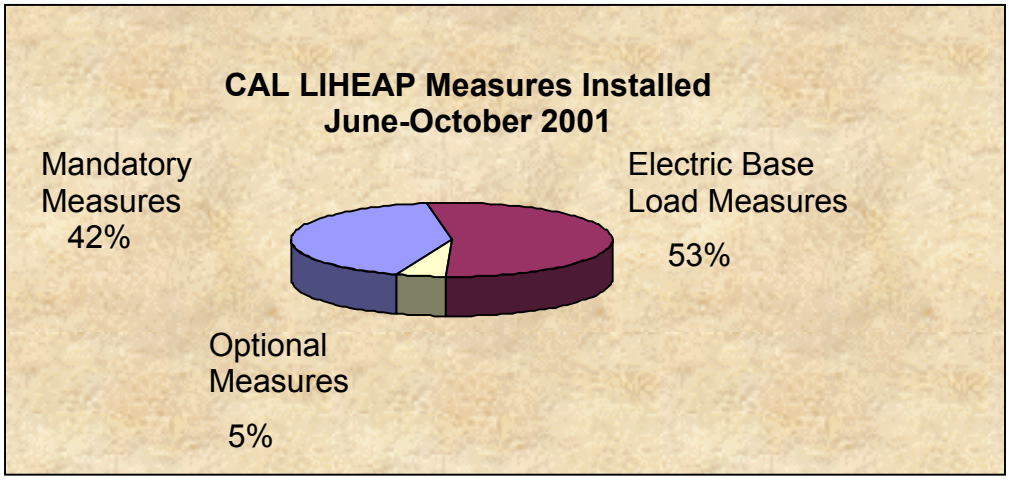


Figure 1: CAL LIHEAP Measures Installed

The Electric Base Load Measures were the largest group of measures installed by the CAL LIHEAP Service Providers. Over half (53%) of the measures installed June through October were Electric Base Load Measures. Mandatory Measures (at 42%) were the second largest group of measures, and the least significant of the three groups was the Optional Measures at 5%.

Shown in Figure 2 below are the quantities of each Electric Base Load Measure installed by the CAL LIHEAP Service Providers.

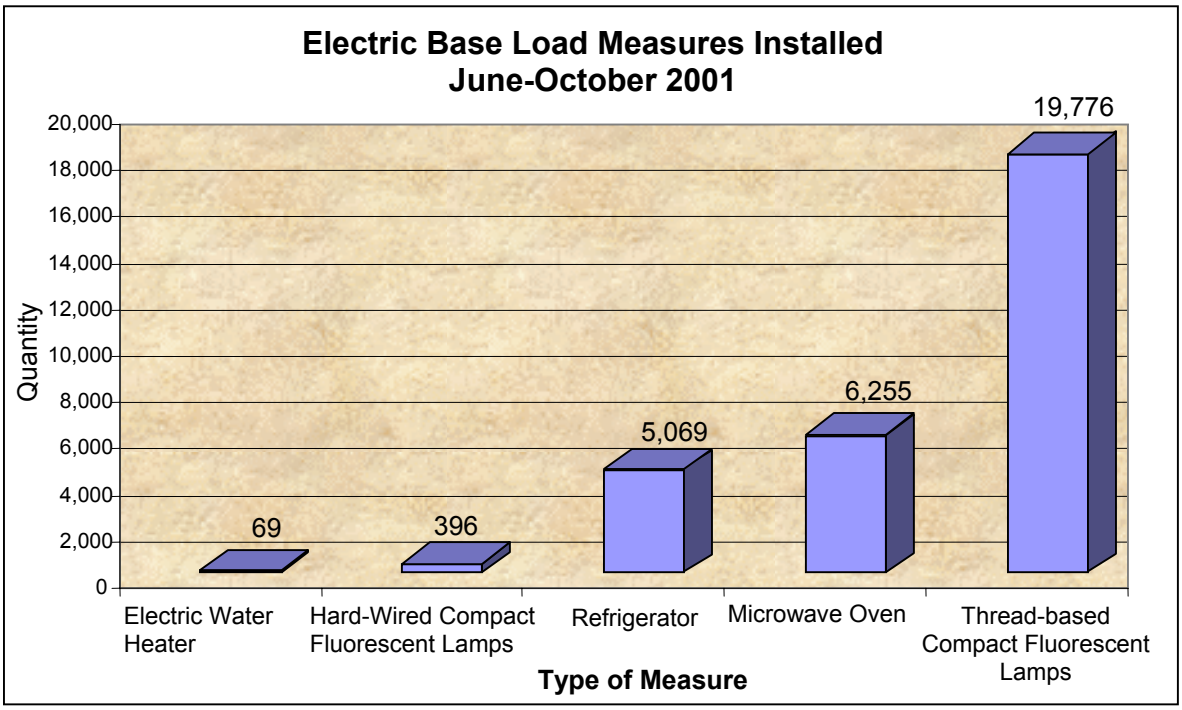


Figure 2: Electric Base Load Measures Installed

Shown in Table 2 below and Figure 3 on the next page are the number of Mandatory, Electric Base Load, Optional, and Other Optional measures installed each month by the 32 CAL LIHEAP Service Providers.

Weatherization Measure Installation
Monthly Report

Month	Type of Measure Installed	Qty Installed
June	Mandatory	2,895
	Electric Base Load	1,516
	Optional	203
	Other Optional	52
July	Mandatory	7,352
	Electric Base Load	4,676
	Optional	734
	Other Optional	97
August	Mandatory	7,455
	Electric Base Load	14,555
	Optional	716
	Other Optional	169
September	Mandatory	4,201
	Electric Base Load	5,755
	Optional	462
	Other Optional	109
October	Mandatory	2,956
	Electric Base Load	5,063
	Optional	407
	Other Optional	66

Table 2: CAL LIHEAP Service Provider Monthly Installation Report

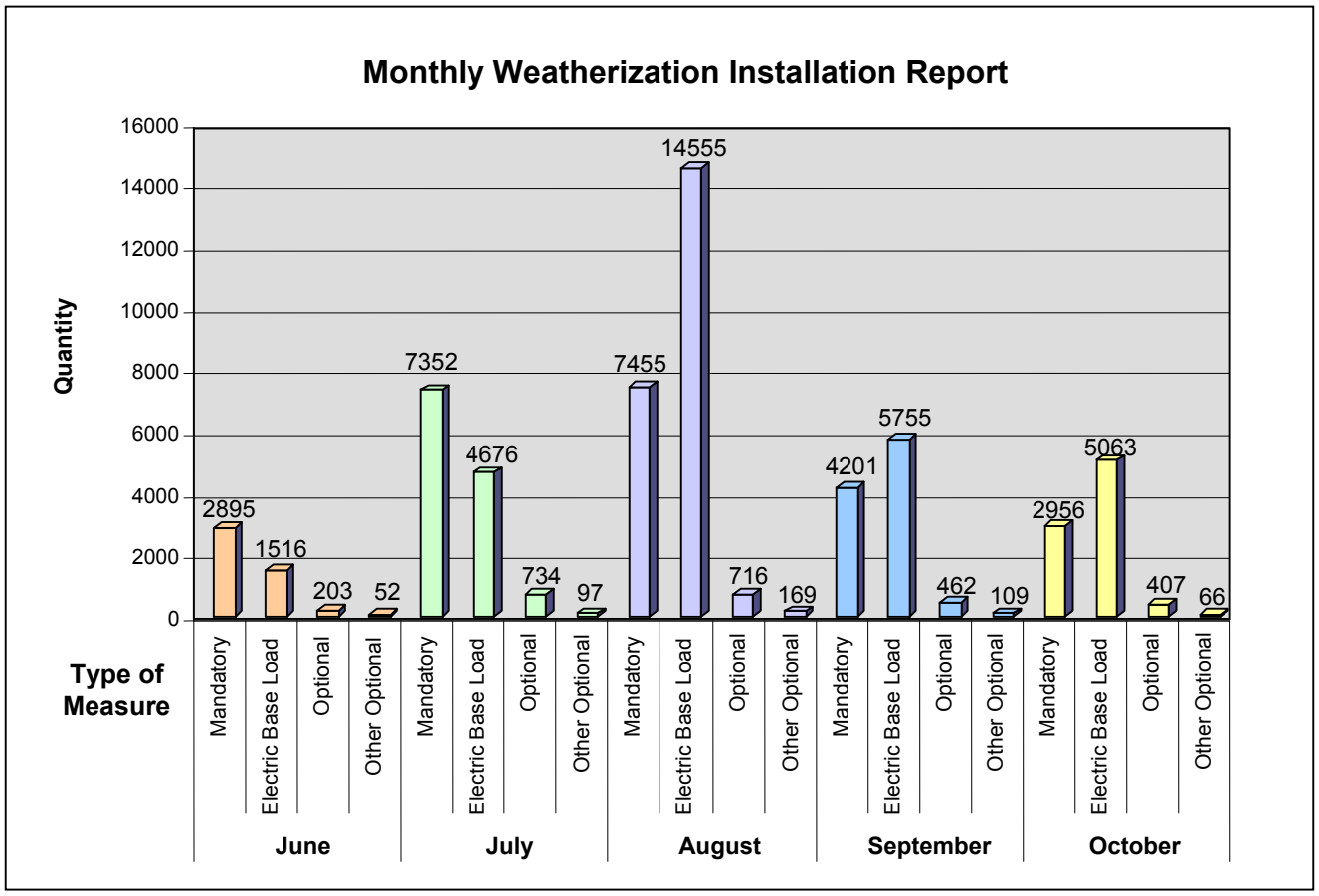


Figure 3: CAL LIHEAP Service Provider Monthly Installation Report

Estimated Energy Savings

Overall, from June 1, 2001 through October 31, 2001, weatherization services have yielded 3,674,904-kilowatt hour savings. The table below shows the annual kilowatt-hour savings for all weatherization measures installed per dollar expended.

Annual Kilowatt Hours Saved	WX Dollars Expended	Kilowatt Hours Saved per dollar expended
3,674,904	**$17,777,618**	**0.2067152079**

This section summarizes estimated yearly energy savings for measures installed during the period of June through October 2001. The total projected yearly energy savings in kWh and therms for each measure installed was estimated and is shown in 1) Table 3 on the next page and 2) Figures 4 and 5 in subsequent pages.

Yearly Estimated Energy Savings per Measure (June-October)

	MANDATORY MEASURES	kWh	Therms
1	Glass Replacement	939	1,646
2	Duct and Register Repair/Replacement	22,211	2,494
3	Minor Envelope Repair	53,033	11,565
4	Evap. Cooler/Air Conditioner Vent Cover (Inside)	0	959
5	a. Ceiling Insulation R11	2,073	1,855
	c. Ceiling Insulation R19	12,136	2,980
	e. Ceiling Insulation R30	5,025	1,815
	f. Ceiling Insulation R38	2,871	706
6	Low-Flow Showerhead	92,493	25,327
7	Hot Water Faucet Restrictor	68,961	16,511
8	Door Weatherstripping	5,179	4,317
9	Water Heater Blanket	13,921	8,495
10	Water Heater Pipe Wrap	3,074	931
11	Duct Wrap	3,968	4,090
12	Switch/Outlet Gaskets	1,083	1,570
13	Caulking	4,943	2,880
14	Other Weatherstripping	1,641	1,298
	Mandatory Measures Energy Savings	293,551	89,440
15	Electric Base Load Measures		
	a. Refrigerator Replacement	1,612,156	0
	b. Electric Water Heater Repair/Replacement	8,901	0
	c. Microwave Oven	62,154	63,245
	d. Thread-based Compact Fluorescent Lamps	1,558,330	0
	e. Hard-Wired Compact Fluorescent Lamps	27,273	0
	Electric Base Load Measures Energy Savings	3,268,813	63,245
	OPTIONAL MEASURES		
1	Ceiling Fans, Per Dwelling	38,115	0
2	Evaporative Cooler Repair	2,131	0
3	Filter Replacement for A/C or Furnace, Filters Only	1,304	430
4	Filter Replacement for A/C or Furnace, Filters + Replacement Signal	1,069	239
5	Setback Thermostat	67,949	36,419
6	Other Optional Measures	1,972	1,486
	Optional Measures Energy Savings	112,540	38,575
	CAL LIHEAP Wx MEASURES TOTAL ENERGY SAVINGS	3,674,904	191,259

Table 3: Yearly Estimated Energy Savings per Measure

The Electric Base Load Measures had the largest estimated kilowatt-hour savings compared to the Mandatory and Optional measures, as shown in Figure 4. This was expected, as the Electric Base Load Measures were given the highest installation priority in the CAL LIHEAP program.

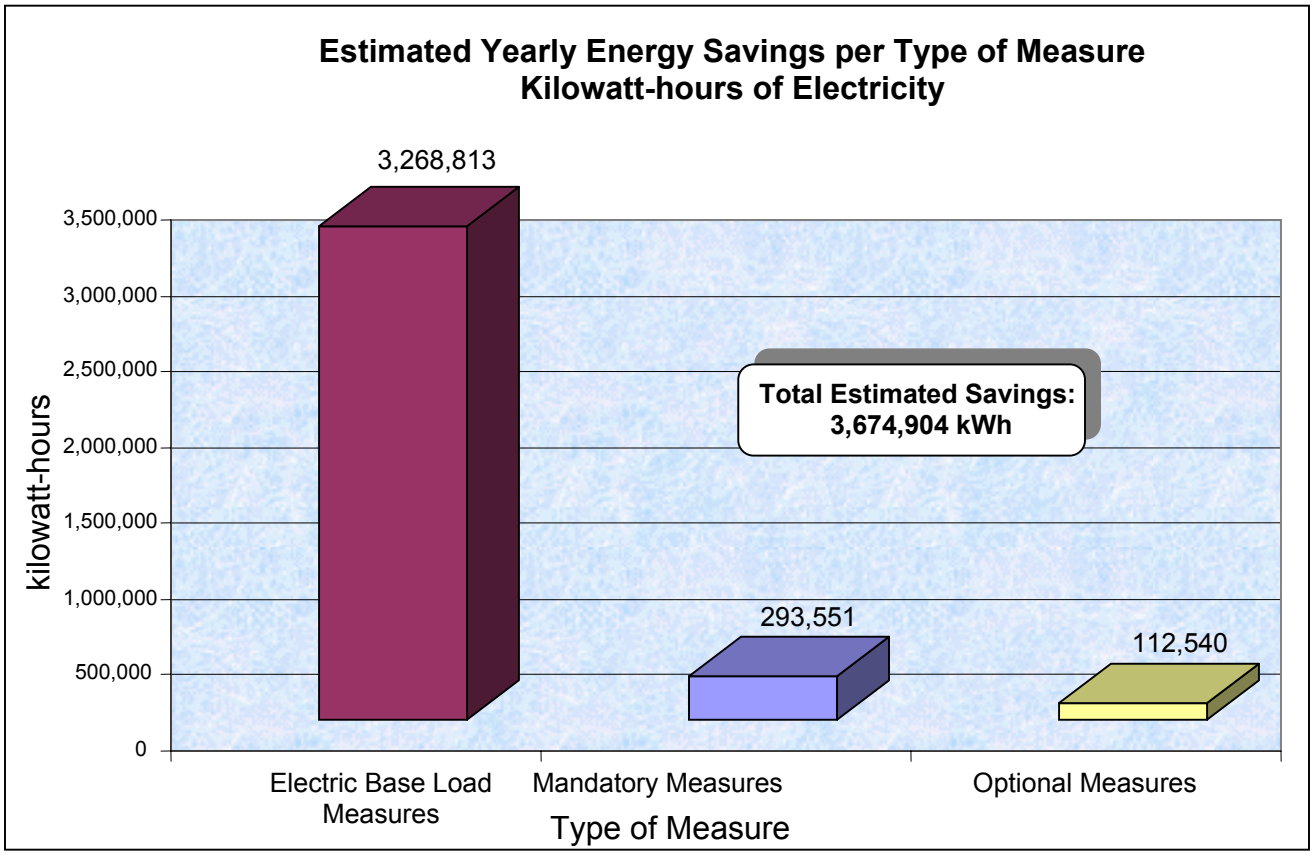


Figure 4: Estimated Yearly Kilowatt-hour Savings per Type of Measure

Depicted in Figure 5 below are estimated therm savings associated with each type of measure. Because most of the Mandatory Measures focus on the building shell performance, the highest projected savings are associated with natural gas and propane savings as opposed to kilowatt-hour savings, since most building are heated with gas. However, the Electric Base Load Measures are projected to achieve some fuel savings, due to the potential savings associated with the installation of microwave ovens, and some limited increased performance of the building shell and the mechanical systems.

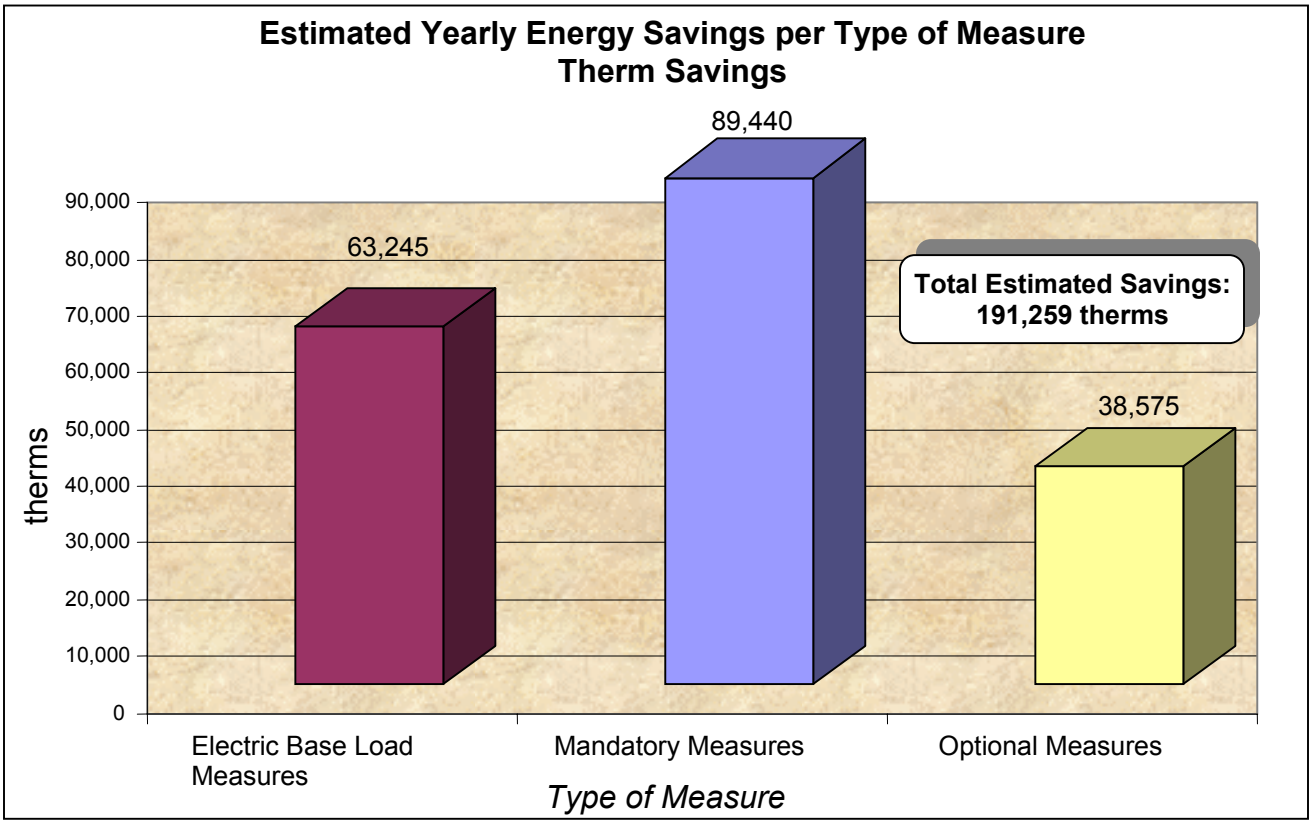


Figure 5: Estimated Yearly Therm Savings per Type of Measure

The estimated yearly kilowatt-hour savings associated with the installation of each Electric Base Load Measure is shown in Figure 6. As shown in the graph the Refrigerator Replacement measure has the highest estimated yearly kilowatt-hour savings impact in the CAL LIHEAP Program. The Thread-base Compact Fluorescent Lamps measure, a very simple measure to install, also proves to have a very positive savings impact.

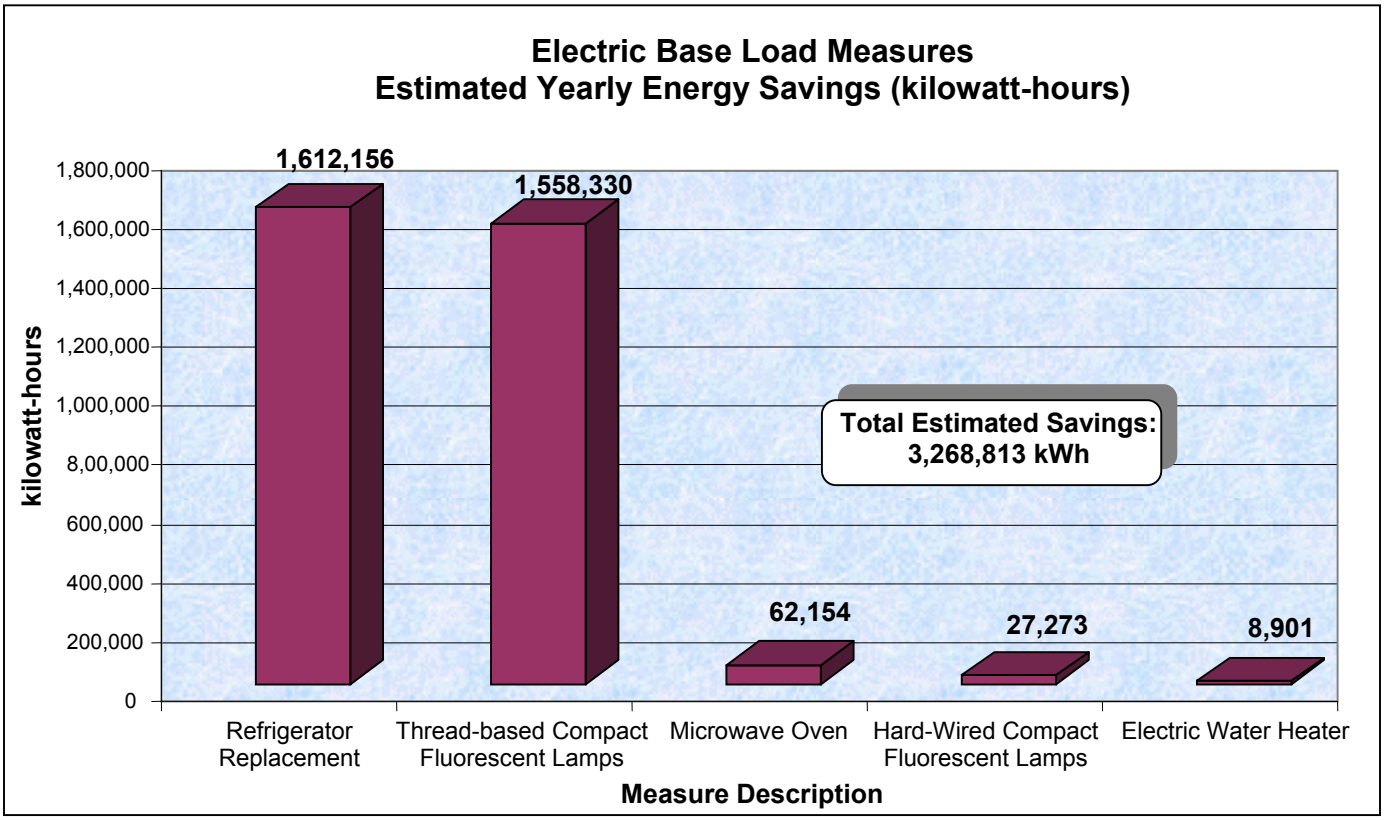


Figure 6: Electric Base Load Measures Estimated Energy Savings

Included in Table 4 is a summary of projected yearly energy savings associated with installation of CAL LIHEAP weatherization measures per month; for the months of June through October 2001. Shown in Figures 7 and 8 is the monthly cumulative estimated kilowatt-hour and therm savings. Appendix C contains a summary of estimated yearly energy savings for each of the 32 CAL LIHEAP Service Providers.

Estimated Yearly Energy Savings
Monthly Report

Month	Type of Measure	kWh	Therms
June	Mandatory	27,930	9,828
	Electric Base Load	134,498	1,325
	Optional	9,228	2,077
	Other Optional	175	145
	June Total	171,831	13,375
July	Mandatory	82,757	24,912
	Electric Base Load	526,047	6,192
	Optional	30,086	12,761
	Other Optional	981	171
	July Total	639,872	44,037
August	Mandatory	101,967	28,438
	Electric Base Load	1,306,870	34,531
	Optional	35,030	9,724
	Other Optional	237	818
	August Total	144,4104	73,512
September	Mandatory	51,436	13,364
	Electric Base Load	679,630	9,389
	Optional	21,524	5,483
	Other Optional	530	278
	September Total	753,121	28,514
October	Mandatory	29,462	12,896
	Electric Base Load	621,768	11,808
	Optional	14,698	7,044
	Other Optional	49	74
	October Total	665,977	31,822
Totals June to October	Mandatory	293,551	89,440
	Electric Base Load	3,268,813	63,245
	Optional	110,568	37,089
	Other Optional	1,972	1,486
	Total Estimated Energy Savings	3,674,904	191,259

Table 4: Monthly Report

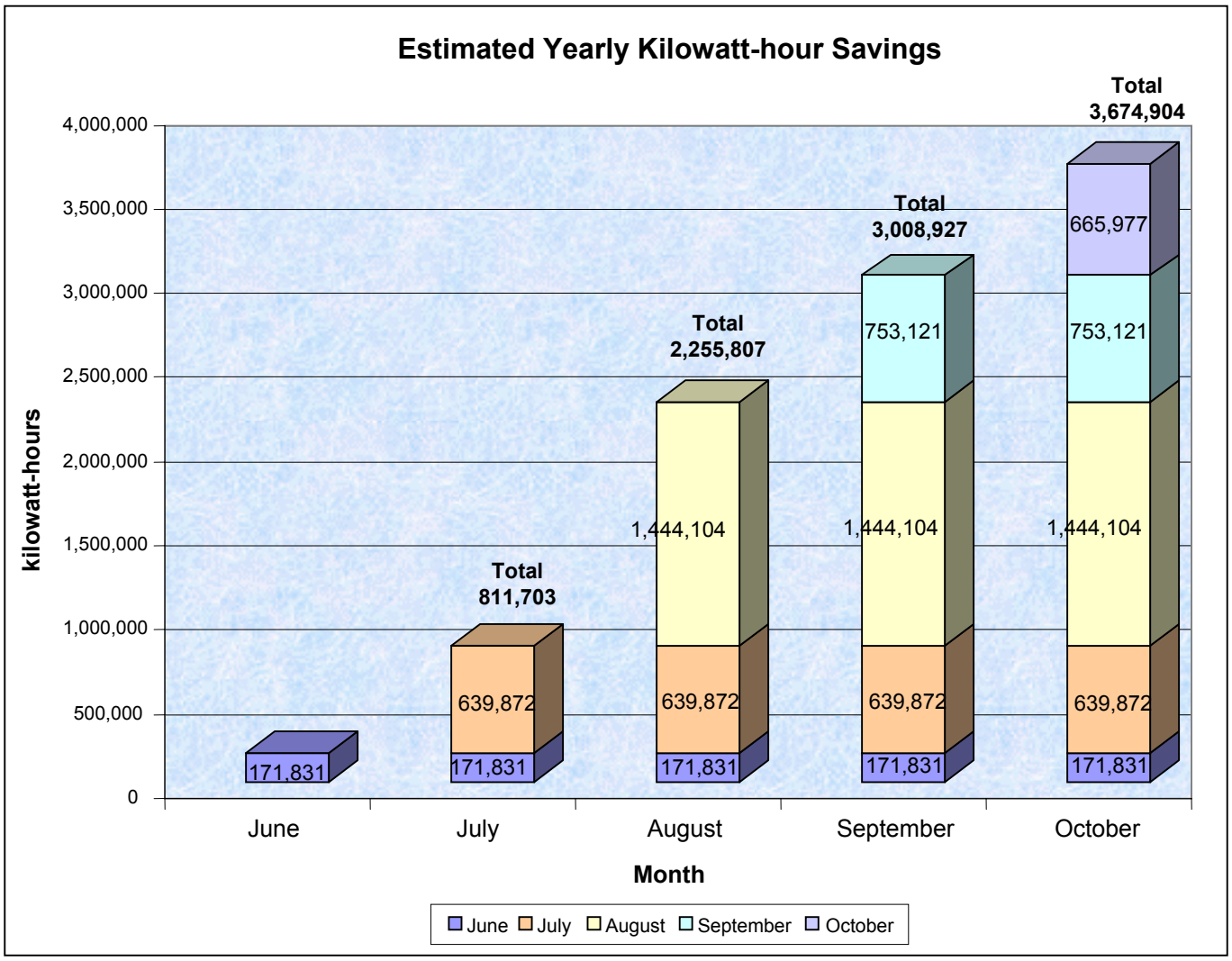


Figure 7: Cumulative Monthly Kilowatt-hour Savings

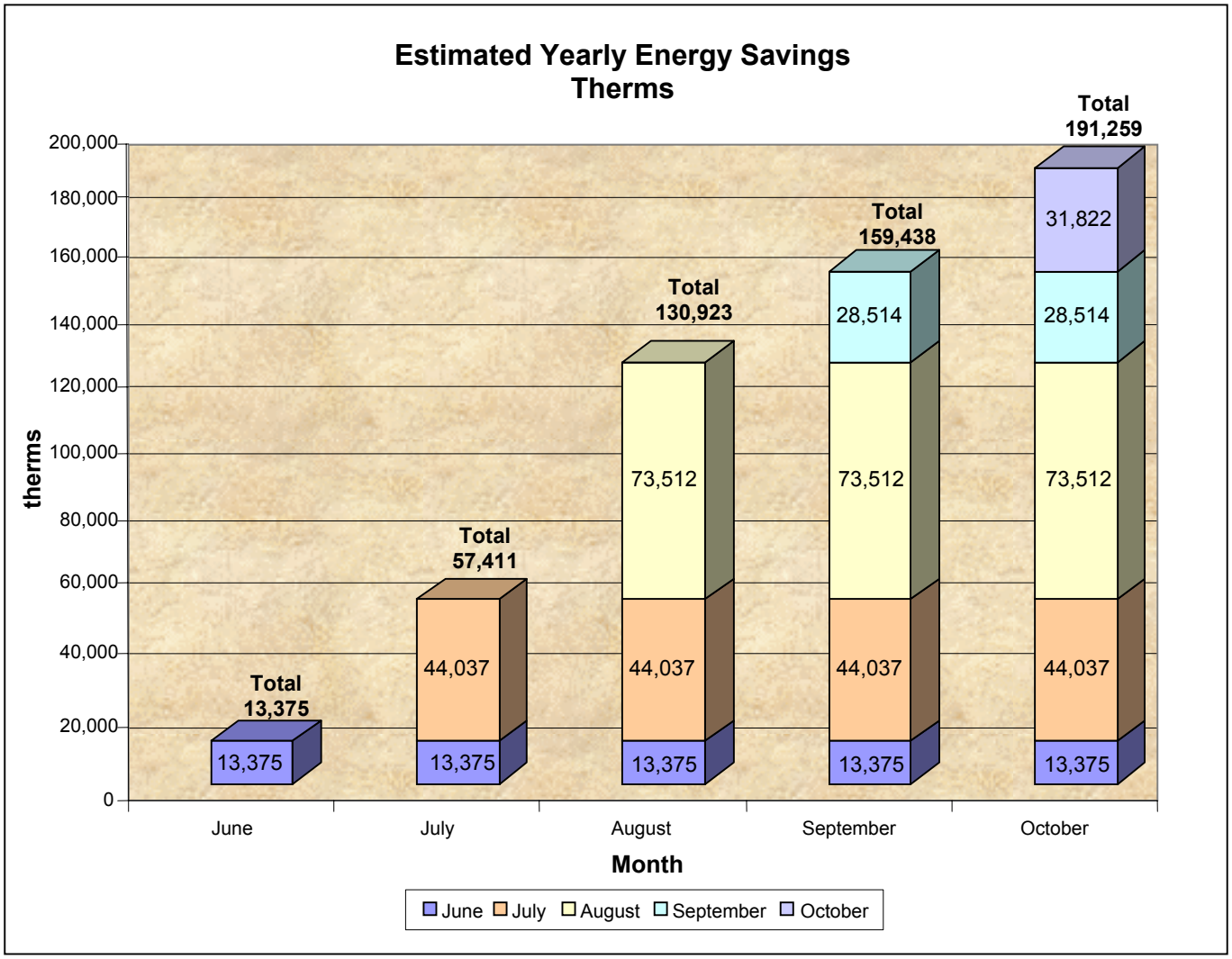


Figure 8: Cumulative Monthly Therm Savings

Additional WX Measures

In a continuing effort to increase flexibility and further reduce the energy demand, CSD received input from its local service providers for additional weatherization measures to incorporate into the CAL LIHEAP Program. Based on the input, a list of measures was submitted to RHA for analysis and assessment. In a preliminary analysis, which included assessing each measure in terms of the practicality and ease of implementation and potential energy benefits, the initial list was reduced and the remaining measures were further evaluated. The in-depth assessment included the following for each measure:

- Contractor Licensing Requirements
- Training Needs
- Existence of current Weatherization Installation Standards
- Availability of Product
- Electric Impact
- Health and Safety Benefits
- Technical Skills Requires
- Climate Zone Considerations
- Possible Issues/Liability
- Other Non-Energy Benefits

As a result of the analysis the following additional measures were selected:

- Evaporative Cooler Installation,
- Fluorescent Torchiere Lamp,
- Exchange Window and Wall Air Conditioner Replacement, and
- High Performance Windows (Conventional Home Only).

Weatherization Installation Standards and Policies and Procedures are being developed for these four additional measures and these measures will be incorporated in a future contract amendment.

Program Accomplishments

(June 1, 2001 through October 31, 2001)

Households Served

As noted above, CSD contracts with forty-five (45) public and private community based organizations to provide CAL LIHEAP services to California's low-income population. During the period of June 1, 2001 through October 31, 2001, these CAL LIHEAP Local Service Providers have served:

57,116 low-income households:

- 13,920 households in crisis situation received ECIS assistance.
- 25,027 households energy received CAP assistance.
- 18,169 homes weatherized for energy efficiency:
  - 11,575 refrigerators installed.
  - 105 electric water heaters installed.
  - 11,064 microwave ovens installed.
  - 17,781 compact fluorescent lamps installed.

71,081 Vulnerable Population (VP) Individuals:

- 18,331 Elderly
- 16,283 Disabled
- 12,592 Limited-English-Speaking
- 569 Migrant Farmworker
- 624 Seasonal Farmworker
- 22,682 Children (0-5)

CSD is striving to serve each vulnerable population group at a level comparable to their percentage of California's total population. The chart below shows the results of the most recent data in respect to service to vulnerable populations with CAL LIHEAP funds.

Vulnerable Populations	Population based on 1990 Census	% of Population	% of VP Individuals served under CAL LIHEAP
Children	2,376,474	7.99%	13.24%
Elderly	4,224,441	14.20%	10.70%
Disabled	2,353,808	7.91%	9.50%
Limited-English-Speaking	2,648,803	8.90%	7.35%
Migrant and Seasonal Farmworkers	938,758	3.15%	0.70%

Additional Funding for Vulnerable Populations

Senate Bill 5X requires CSD to examine the penetration of other energy programs, including, but not limited to, those provided through federal LIHEAP, utility companies and other parties, to identify the adequacy of services to elderly persons, disabled persons, limited-English-speaking persons, migrant and seasonal farmworkers and households with very young children. The legislation also requires that CAL LIHEAP funds should be distributed so as to ensure that vulnerable populations have comparable access to energy programs.

Unfortunately, none of the existing energy programs, with the exception of CAL LIHEAP, capture data on all the vulnerable populations specified in SB 5X. The federal LIHEAP program captures data on the elderly, the disabled, and households with very young children; however, data on limited-English-speaking persons, and migrant and seasonal farmworkers is not required to be collected. CSD has required the CAL LIHEAP Local Service Providers to report on all the vulnerable populations specified in SB 5X; however, in order to obtain an adequate amount of data, it was necessary for CSD to collect several months worth of information in the CAL LIHEAP program.

In the interim, CSD's Director awarded $500,000 of Community Services Block Grant (CSBG) Discretionary funding to La Cooperativa Campesina de California and its network of Migrant Seasonal Farmworker agencies to provide start up costs for their leveraging activities with Pacific Gas and Electric Company (PG&E). La Cooperativa provided outreach and intake to migrant and seasonal farmworker households and coordinated the replacement of refrigerators and the installation of compact fluorescent bulbs in these same households. For every dollar of CSBG Discretionary funding spent, La Cooperativa leveraged $7 (seven dollars) of PG&E low-income energy efficiency funding in the form of 69,875 compact fluorescent bulbs and 6,918 refrigerators, which have been installed in 18,839 eligible migrant and seasonal farmworker households.

As mentioned in the previous section of this report, the penetration rate for several of the vulnerable populations has not been adequate; e.g. migrant and seasonal farmworkers, and the elderly. CSD has been appropriated $4.8 million of Petroleum Violation Escrow Account (PVEA) funds for the 2001-2002 State Fiscal Year for weatherization services and energy cash assistance. CSD's Director has earmarked at least half of that amount to mitigate the underserved vulnerable populations. La Cooperativa has just been awarded $300,000 of the PVEA funds to continue their leveraging partnership with PG&E and to expand it to the Southern California Edison Company to provide additional energy services to eligible migrant and seasonal farmworker households.

Estimated Unmet Need

The program objectives as defined by Senate Bill 5X were to 1) increase energy conservation and reduce demand for energy services in low-income households, 2) assure that the most vulnerable households cope with high energy costs and 3) increase participation in the federal LIHEAP program.

Shown below is the estimated unmet need for low-income persons at or below 250% of the Federal Poverty level.

Number of Households at or below 250% of Federal Poverty level.	5,145,014
Number of Households Served Under CAL LIHEAP	57,116
Estimated Number of Low-Income Households Unserved	**5,087,898** **98.89%**

Automated Data Collection and Reporting

In 1999-2000, CSD developed, designed and implemented an automated data collection and reporting system to continuously collect and track federal LIHEAP client data. The *California LIHEAP Automated Services System (CLASS)*, facilitates the use of the Extranet for on-line data entry and data file transfer between the department and its network of contracting LIHEAP/CAL LIHEAP Local Service Providers. At the onset of CAL LIHEAP, CLASS was redesigned to collect CAL LIHEAP eligible households in addition to federal LIHEAP data.

CLASS revolutionizes the intake process at the local level. First, the method of CLASS On-line Entry, allows local service providers to enter client data directly into CSD's databases. Entered data is then evaluated for eligibility purposes (income and priority). The second method of Data-Base Transfer (DBT), allows those local service providers, using stand alone database platforms, to support the intake processes of CAP and ECIS, to provide CSD with client data approved for benefits through the means of data file transfer. Essentially, DBT service providers provide data file extracts to CSD, in which they are up-loaded into CSD databases for benefit issuance. Once records are deemed eligible for payment, then CSD will issue CAP and ECIS benefits, by either issuing a warrant or by directly crediting the client's utility account.

The CLASS On-line Entry assists CAL LIHEAP Service Providers in targeting and prioritizing the delivery of CAP and ECIS assistance. Based on approved local service provider priority plans, CLASS will rank those households, based on input client values in order of priority. Typically, priority is based on household incomes, energy burden,

and other factors such as members of target populations including households with children, elderly, disabled, limited-English-speaking and migrant and seasonal farmworkers.

CAL LIHEAP Local Service Providers use CLASS to monitor and maintain client data, monitor on-line reports, resolve ECIS and CAP payment issues and to transmit data for those clients completing a dual-purpose Energy Intake Form for those clients who wish to apply for the California Alternate Rates for Energy (CARE).

In addition to the CLASS System, CSD requires CAL LIHEAP Local Service Providers to submit monthly reports on total expenditures, number of weatherization measures installed, types of dwellings weatherized, vulnerable populations served, households assisted, etc. This data is entered into CSD's Programs, Audits, Reports and Contracts (PARC) system where staff is able to monitor and assess the progress of each local service provider.

Conclusion

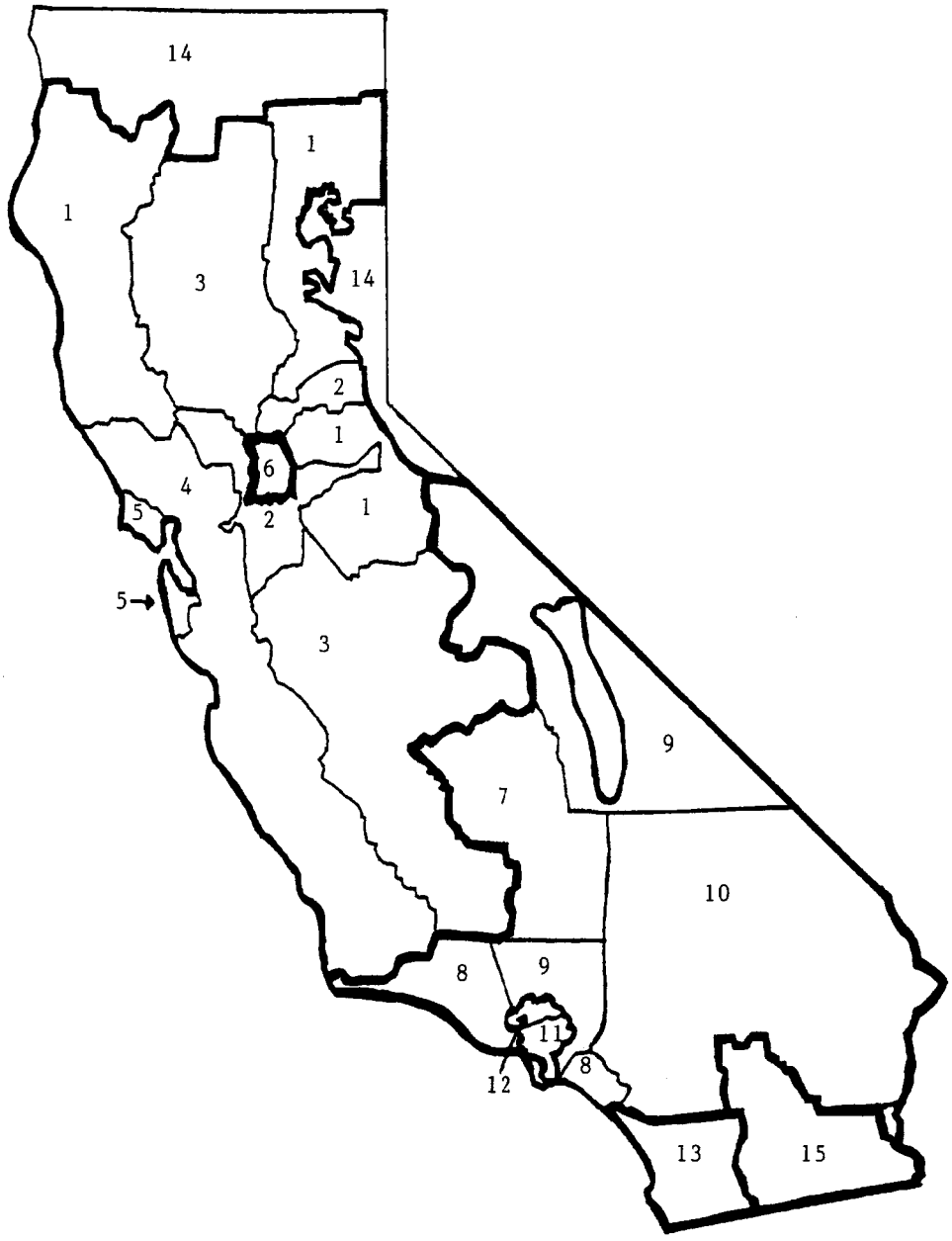
The urgency involved in the implementation of CAL LIHEAP was critical to the low-income households throughout the State of California who were adversely affected by the energy crisis. The cash assistance payments provided financial relief, which allowed these households to direct their limited income towards other household necessities and the WX program began to reduce the demand for energy and produced immediate significant energy savings. The CAL LIHEAP Local Service Providers rose to the occasion and focused their efforts in achieving significant accomplishments. CSD appreciates and commends the ongoing efforts and support of all parties involved in this essential program.

APPENDICES

Appendix A

Since CSD CAL LIHEAP is a statewide program, its service territory traverses multiple climate zones and includes customers from the four major investor-owned utilities. In order to apply the per measure energy impacts developed in the CEC Statewide 2001 Database for Energy Efficiency Resources (DEER) Update Study, each CAL LIHEAP Service Provider was assigned a CEC Forecasting Climate Zone that correlated with the utility in which the agency performs weatherization services. It should be noted that the CEC Forecasting Climate Zones used in the 2001 DEER Update study are different than the Title-24 climate zones. Appendix A contains 1) a map illustrating the CEC climate zones, and 2) a list of the 45 Service Providers with their corresponding CEC Forecasting Climate Zones.

Map of California Energy Commission Forecasting Climate Zones



CAL LIHEAP Providers Forecasting Climate Zones

#	CAL LIHEAP Service Provider	CEC Forecasting Climate Zone	Utility
1	Amador-Tuolumne Community Action Agency	1,14	PG&E
2	California Human Development Corp.	4	PG&E
3	Campesinos Unidos, Inc.	15	SDG&E
4	Central Valley Opportunity Center, Inc.	3	PG&E
5	City of Berkeley	4	PG&E
6	Colusa-Glenn-Trinity Community Action Agency	3	PG&E
7	Community Action Agency of Butte County, Inc.	3	PG&E
8	Community Action Agency of San Mateo County, Inc.	5	PG&E
9	Community Action Commission of Santa Barbara County	4	PG&E
10	Community Enhancement Services	9, 12, 16	SCE/SoCal Gas
11	Community Resource Project, Inc.	3	PG&E
12	Community Services and Employment Training, Inc.	7	SCE/SoCal Gas
13	Contra Costa County Community Services Department	4	PG&E
14	County of Riverside, Department of Community Action	10	SCE/SoCal Gas
15	Del Norte Senior Center	14	PG&E
16	Economic and Social Opportunities, Inc.	4	PG&E
17	Economic Opportunity Commission of San Luis Obispo, Inc.	4	PG&E
18	Economic Opportunity Council of San Francisco	5	PG&E
19	El Dorado County Department of Community Services	1, 14	PG&E
20	Energy Services, Community Action Board of Santa Cruz County, Inc.	4	PG&E
21	Fresno County Economic Opportunities Commission	3	PG&E
22	Great Northern Corporation	14	PG&E
23	Inyo Mono Advocates for Community Action, Inc.	9	SCE/SoCal Gas
24	Kern County Economic Opportunity Corp.	3, 7	PG&E/SCE SoCal Gas
25	Kings Community Action Organization, Inc.	3	PG&E
26	Madera County Community Action Committee, Inc.	3	PG&E
27	Maravilla Foundation	9, 12, 16	SCE/SoCal Gas
28	Mariposa County Human Services Department	3	PG&E
29	Merced County Community Action Agency	3	PG&E
30	Metropolitan Area Advisory Committee	13	SDG&E
31	Nevada County Department of Housing and Community Services	1, 14	PG&E
32	North Coast Energy Services	1	PG&E
33	Orange County Community Development Council, Inc.	8	SCE/SoCal Gas
34	Pacific Asian Consortium in Employment	9, 12, 16	SCE/SoCal Gas
35	Plumas County Community Development Commission	1, 14	PG&E
36	Project Go, Inc.	2	PG&E
37	Redwood Community Action Agency	1	PG&E
38	San Benito County Dept. of Comm. Serv. & Workforce Dev.	4	PG&E
39	San Bernardino County Community Services Department	10	SCE/SoCal Gas
40	San Joaquin County Dept. of Aging, Children's and Comm. Serv.	2	PG&E
41	Self-Help Home Improvement Project, Inc.	3	PG&E

#	CAL LIHEAP Service Provider	CEC Forecasting Climate Zone	Utility
42	Spectrum Community Services, Inc.	4	PG&E
43	TEACH, Inc.	14	PG&E
44	Ventura County Commission on Human Concerns	8	SCE/SoCal Gas
45	Veterans in Community Services, Inc.	9, 12, 16	SCE/SoCal Gas

Appendix B

Per Measure Energy Impact

Utility Service Territory PG&E
CEC Forecasting Climate Zones: 1 to 5

	DEPARTMENT OF COMMUNITY SERVICES AND DEVELOPMENT 2001 CALIFORNIA LIHEAP	CSD Energy Savings			Source
		Per Measure Electric Impact (kWh)		Per Measure Gas Impact (Therms)	
		SH	AC		
	WEATHERIZATION ACTIVITIES				
1	Non-Blower Door Assessment (with attic)	No Energy Savings			
2	Non-Blower Door Assessment (without attic)	No Energy Savings			
3	Safety Check of Combustion Appliances (Pre-Test)	No Energy Savings			
4	Safety Check of Combustion Appliances (Post-Test)	No Energy Savings			
5	Blower Door Test	No Energy Savings			
6	Duct Leakage Pre-Test	No Energy Savings			
7	Duct Leakage Post-Test	No Energy Savings			
	MANDATORY MEASURES				
1	Combustion Appliance Safety Hazard Repair/Replacement	No Energy Savings			
2	Glass Replacement(SF)	5.9	5.9	3.0	**[1]**
	Glass Replacement(MF)	1.1	1.1	2.0	**[1]**
3	Duct and Register Repair/Replacement (SF)	258.4	258.4	20.0	**[1]**
	Duct and Register Repair/Replacement (MF)	142.0	142.0	0.0	**[1]**
4	Minor Envelope Repair(SF)	67.9	32.5	7.2	**[2]**
	Minor Envelope Repair (MF)	66.5	25.5	0.7	**[2]**
5	Evap. Cooler/Air Conditioner Vent Cover (Inside)(SF)			2.6	**[2]**
	Evap. Cooler/Air Conditioner Vent Cover (Inside) (MF)			2.6	**[2]**
6	Attic Venting	No Energy Savings			
7	a. Ceiling Insulation R11 (SF)	271.7	129.9	29.0	**[2]**
	a. Ceiling Insulation R11 (MF)	266.1	102.0	2.9	**[2]**
	b. Kneewall Insulation R11	Included in Ceiling Insulation			
	c. Ceiling Insulation R19 (SF)	271.7	129.9	29.0	**[2]**
	c. Ceiling Insulation R19 (MF)	266.1	102.0	2.9	**[2]**
	d. Kneewall Insulation R19	Included in Ceiling Insulation			
	e. Ceiling Insulation R30 (SF)	271.7	129.9	29.0	**[2]**
	e. Ceiling Insulation R30 (MF)	266.1	102.0	2.9	**[2]**
	f. Ceiling Insulation R38 (SF)	271.7	129.9	29.0	**[2]**
	f. Ceiling Insulation R38 (MF)	266.1	102.0	2.9	**[2]**
8	Low-Flow Showerhead (MF)	185.7		9.7	**[1]**
	Low-Flow Showerhead (SF)	149.0		8.7	**[1], [2]**
9	Hot Water Faucet Restrictor(SF)	72.7		3.7	**[1]**
	Hot Water Faucet Restrictor(MF)	58.3		3.0	**[1]**
10	Door Weatherstripping (SF)	5.9	5.9	3.0	**[1]**
	Door Weatherstripping (MF)	3.0	3.0	1.0	**[1], [2]**

Utility Service Territory PG&E
CEC Forecasting Climate Zones: 1 to 5

	DEPARTMENT OF COMMUNITY SERVICES AND DEVELOPMENT 2001 CALIFORNIA LIHEAP	CSD Energy Savings			Source
		Per Measure Electric Impact (kWh)		Per Measure Gas Impact (Therms)	
		SH	AC		
11	Water Heater Blanket (SF)	251.0		13.0	[1]
	Water Heater Blanket (MF)	202.0		12.0	[1]
12	Water Heater Pipe Wrap (SF)	53.0		3.3	[2]
	Water Heater Pipe Wrap (MF)	53.0		3.3	[2]
13	Duct Wrap (SF)	124.0	124.0	10.0	[3]
	Duct Wrap (MF)	93.0	93.0	7.5	[3]
14	Switch/Outlet Gaskets (SF)	0.7	0.7	0.8	[1], [2]
	Switch/Outlet Gaskets (MF)	0.8	0.8	0.8	[1], [2]
15	Caulking. Per Dwelling (SF)	6.4	6.4	2.0	[1], [2]
	Caulking. Per Dwelling (MF)	3.0	3.0	1.0	[1], [2]
16	Other Weatherstripping (SF)	4.0	4.0	2.0	[1], [2]
	Other Weatherstripping (MF)	3.0	3.0	1.0	[1], [2]
17	**Electric Base Load Measures:**				
	a. Refrigerator Replacement (SF)	355			[1]
	a. Refrigerator Replacement (MF)	315			[1]
	a. Refrigerator (2nd Removed)	1077			[3]
	b. Electric Water Heater Repair	No Energy Savings			
	b. Electric Water Heater Replacement	129			[1]
	c. Microwave Oven (New)	273.3		28.8	[3]
	c. Microwave Oven (Replacement)	Calculation			[5]
	d. Thread-based Compact Fluorescent Lamps	Calculation			[5]
	e. Hard-Wired Compact Fluorescent Lamps	Calculation			[5]
	OPTIONAL MEASURES				
1	Ceiling Fans(SF)		165.0		[3]
	Ceiling Fans (MF)		165.0		[3]
2	Evaporative Cooler Repair (SF)		177.6		[2]
	Evaporative Cooler Repair (MF)		177.6		[2]
3	Filter Replacement for A/C or Furnace, Filters Only (SF)		4.9	1.1	[2]
	Filter Replacement for A/C or Furnace, Filters Only (MF)		3.8	0.1	[2]
4	Filter Replacement for A/C or Furnace, Filters + Replacement Signal (SF)		4.9	1.1	[2]
	Filter Replacement for A/C or Furnace, Filters + Replacement Signal (MF)		3.8	0.1	[2]
5	Setback Thermostat, (SF)	330.0	330.0	60.0	[2]
	Setback Thermostat(MF)	170.1	170.1	23.0	[2]
6	**Other Optional Measures**				
a.	Floor Insulation (+36") Clearance	0.0	0.0	30.2	[1]
	Floor Insulation (-36") Clearance	0.0	0.0	30.2	[1]
b.	Electric Water Heater Timer (SF)	136.0	136.0		[3]
	Electric Water Heater Timer (MF)	102.0	102.0		[3]

Utility Service Territory PG&E
CEC Forecasting Climate Zones: 1 to 5

	DEPARTMENT OF COMMUNITY SERVICES AND DEVELOPMENT 2001 CALIFORNIA LIHEAP	CSD Energy Savings			
		Per Measure Electric Impact (kWh)		Per Measure Gas Impact (Therms)	
		SH	AC		Source
c.	Shadescreen (SF)		1.7		[1]
	Shadescreen (MF)		2.9		[1]
d.	Shutters (SF)			6.7	[1]
	Shutters (MF)			10.0	[1]
e.	Storm Window --Operable(Vinyl, Polycarb, Glass), Fixed (SF)	7.8	7.8	6.7	[1]
	Storm Window --Operable(Vinyl, Polycarb, Glass), Fixed (MF)			10.0	[1]
f.	Tinted Film (SF)		3.4	0.0	[1]
	Tinted Film (MF)		5.5	0.0	[1]
g.	Wood Fueled Space Heater(SF)	984.0		175.5	[3]
	Wood Fueled Space Heater(MF)	775.0		107.0	[3]

Legend:
SH - Space Heating
AC - Central Air Conditioning
SF - Single Family
MF - Multi Family

[1] Joint Utility Low Income Energy Efficiency Program Costs and Bill Savings Standardization Report, March 5, 2001
[2] 2001 DEER Update Study
[3] RHA Estimate
[4] Residential Energy Survey Report, 1994
[5] Calculation using kWh difference between old and new unit

Utility Service Territory SCE/SoCal Gas
CEC Forecasting Climate Zones: 9, 10, 12 and 16

	DEPARTMENT OF COMMUNITY SERVICES AND DEVELOPMENT 2001 CALIFORNIA LIHEAP	CSD Energy Savings			Source
		Per Measure Electric Impact (kWh)		Per Measure Gas Impact (Therms)	
		SH	AC		
	WEATHERIZATION ACTIVITIES				
1	Non-Blower Door Assessment (with attic)	No Energy Savings			
2	Non-Blower Door Assessment (without attic)	No Energy Savings			
3	Safety Check of Combustion Appliances (Pre-Test)	No Energy Savings			
4	Safety Check of Combustion Appliances (Post-Test)	No Energy Savings			
5	Blower Door Test	No Energy Savings			
6	Duct Leakage Pre-Test	No Energy Savings			
7	Duct Leakage Post-Test	No Energy Savings			
	MANDATORY MEASURES				
1	Combustion Appliance Safety Hazard Repair/Replacement	No Energy Savings			
2	Glass Replacement(SF)	2.9	2.9	1.5	**[1]**
	Glass Replacement(MF)	0.8	0.8	0.5	**[1]**
3	Duct and Register Repair/Replacement (SF)	133.4	133.4	11.0	**[1]**
	Duct and Register Repair/Replacement (MF)	117.1	117.1	0.0	**[1]**
4	Minor Envelope Repair(SF)	67.9	32.5	7.2	**[2]**
	Minor Envelope Repair (MF)	66.5	25.5	0.7	**[2]**
5	Evap. Cooler/Air Conditioner Vent Cover (Inside)(SF)			2.6	**[2]**
	Evap. Cooler/Air Conditioner Vent Cover (Inside) (MF)			2.6	**[2]**
6	Attic Venting	No Energy Savings			
7	a. Ceiling Insulation R11 (SF)	271.7	129.9	18.9	**[2]**
	a. Ceiling Insulation R11 (MF)	266.1	102.0	18.9	**[2]**
	b. Kneewall Insulation R11	Included in Ceiling Insulation			
	c. Ceiling Insulation R19 (SF)	271.7	129.9	18.9	**[2]**
	c. Ceiling Insulation R19 (MF)	266.1	102.0	18.9	**[2]**
	d. Kneewall Insulation R19	Included in Ceiling Insulation			
	e. Ceiling Insulation R30 (SF)	271.7	129.9	18.9	**[2]**
	e. Ceiling Insulation R30 (MF)	266.1	102.0	18.9	**[2]**
	f. Ceiling Insulation R38 (SF)	271.7	129.9	18.9	**[2]**
	f. Ceiling Insulation R38 (MF)	266.1	102.0	18.9	**[2]**
8	Low-Flow Showerhead (MF)	185.7		9.7	**[1]**
	Low-Flow Showerhead (SF)	149.0		8.7	**[1], [2]**
9	Hot Water Faucet Restrictor(SF)	72.7		3.7	**[1]**
	Hot Water Faucet Restrictor(MF)	58.3		3.0	**[1]**
10	Door Weatherstripping (SF)	2.9	2.9	1.5	**[1]**
	Door Weatherstripping (MF)	2.9	2.9	0.6	**[1], [2]**
11	Water Heater Blanket (SF)	251.0		13.0	**[1]**
	Water Heater Blanket (MF)	202.0		12.0	**[1]**
12	Water Heater Pipe Wrap (SF)	53.0		3.3	**[2]**
	Water Heater Pipe Wrap (MF)	53.0		3.3	**[2]**

Utility Service Territory SCE/SoCal Gas
CEC Forecasting Climate Zones: 9, 10, 12 and 16

	DEPARTMENT OF COMMUNITY SERVICES AND DEVELOPMENT 2001 CALIFORNIA LIHEAP	CSD Energy Savings			
		Per Measure Electric Impact (kWh)		Per Measure Gas Impact (Therms)	
		SH	AC		Source
13	Duct Wrap (SF)	124.0	124.0	5.5	[3]
	Duct Wrap (MF)	93.0	93.0	4.1	[3]
14	Switch/Outlet Gaskets (SF)	1.0	0.8	0.8	[1], [2]
	Switch/Outlet Gaskets (MF)	1.1	1.1	0.8	[1], [2]
15	Caulking. Per Dwelling (SF)	5.8	5.8	1.5	[1], [2]
	Caulking. Per Dwelling (MF)	5.0	5.0	0.4	[1], [2]
16	Other Weatherstripping (SF)	3.1	3.1	2.0	[1], [2]
	Other Weatherstripping (MF)	2.9	2.9	0.6	[1], [2]
17	**Electric Base Load Measures:**				
	a. Refrigerator Replacement (SF)	355			[1]
	a. Refrigerator Replacement (MF)	315			[1]
	a. Refrigerator (2nd Removed)	1077			[3]
	b. Electric Water Heater Repair	No Energy Savings			
	b. Electric Water Heater Replacement	129			[1]
	c. Microwave Oven (New)	273.3		28.8	[3]
	c. Microwave Oven (Replacement)	kWh difference between old and new			[5]
	d. Thread-based Compact Fluorescent Lamps	kWh difference between old and new			[5]
	e. Hard-Wired Compact Fluorescent Lamps	kWh difference between old and new			[5]
	OPTIONAL MEASURES				
1	Ceiling Fans(SF)		165.0		[3]
	Ceiling Fans (MF)		165.0		[3]
2	Evaporative Cooler Repair (SF)		177.6		[2]
	Evaporative Cooler Repair (MF)		177.6		[2]
3	Filter Replacement for A/C or Furnace, Filters Only (SF)		4.9	1.1	[2]
	Filter Replacement for A/C or Furnace, Filters Only (MF)		3.8	0.1	[2]
4	Filter Replacement for A/C or Furnace, Filters + Replacement Signal (SF)		4.9	1.1	[2]
	Filter Replacement for A/C or Furnace, Filters + Replacement Signal (MF)		3.8	0.1	[2]
5	Setback Thermostat, Per Dwelling (SF)	330.0	330.0	60.0	[2]
	Setback Thermostat, Per Dwelling (MF)	170.1	170.1	23.0	[2]
6	**Other Optional Measures**				
a.	Floor Insulation (+36") Clearance			36.7	[1]
	Floor Insulation (-36") Clearance			36.7	[1]
b.	Electric Water Heater Timer (SF)	136.0	136.0		[3]
	Electric Water Heater Timer (MF)	102.0	102.0		[3]
c.	Shadescreen (SF)		1.4		[1]
	Shadescreen (MF)		2.5		[1]
d.	Shutters (SF)				[1]
	Shutters (MF)				[1]

Utility Service Territory SCE/SoCal Gas
CEC Forecasting Climate Zones: 9, 10, 12 and 16

	DEPARTMENT OF COMMUNITY SERVICES AND DEVELOPMENT 2001 CALIFORNIA LIHEAP	CSD Energy Savings			
		Per Measure Electric Impact (kWh)		Per Measure Gas Impact (Therms)	
		SH	AC		Source
e.	Storm Window --Operable(Vinyl, Polycarb, Glass), Fixed (SF)				[1]
	Storm Window --Operable(Vinyl, Polycarb, Glass), Fixed (MF)				[1]
f.	Tinted Film (SF)		2.5		[1]
	Tinted Film (MF)		4.6		[1]
g.	Wood Fueled Space Heater(SF)	984.0		175.5	[3]
	Wood Fueled Space Heater(MF)	775.0		107.0	[3]

Legend:
SH - Space Heating
AC - Central Air Conditioning
SF - Single Family
MF - Multi Family

[1] Joint Utility Low Income Energy Efficiency Program Costs and Bill Savings Standardization Report, March 5, 2001

[2] 2001 DEER Update Study
[3] RHA Estimate
[4] Residential Energy Survey Report, 1994
[5] Calculation using kWh difference between old and new unit

Utility Service Territory SDG&E
CEC Forecasting Climate Zones: 13

	DEPARTMENT OF COMMUNITY SERVICES AND DEVELOPMENT 2001 CALIFORNIA LIHEAP	CSD Energy Savings			Source
		Per Measure Electric Impact (kWh)		Per Measure Gas Impact (Therms)	
		SH	AC		
	WEATHERIZATION ACTIVITIES				
1	Non-Blower Door Assessment (with attic)	No Energy Savings			
2	Non-Blower Door Assessment (without attic)	No Energy Savings			
3	Safety Check of Combustion Appliances (Pre-Test)	No Energy Savings			
4	Safety Check of Combustion Appliances (Post-Test)	No Energy Savings			
5	Blower Door Test	No Energy Savings			
6	Duct Leakage Pre-Test	No Energy Savings			
7	Duct Leakage Post-Test	No Energy Savings			
	MANDATORY MEASURES				
1	Combustion Appliance Safety Hazard Repair/Replacement	No Energy Savings			
2	Glass Replacement(SF)			2.0	**[1]**
	Glass Replacement(MF)			0.5	**[1]**
3	Duct and Register Repair/Replacement (SF)	59.3	59.3	7.0	**[1]**
	Duct and Register Repair/Replacement (MF)	46.7	46.7	0.3	**[1]**
4	Minor Envelope Repair(SF)	67.9	32.5	7.2	**[2]**
	Minor Envelope Repair (MF)	66.5	25.5	0.7	**[2]**
5	Evap. Cooler/Air Conditioner Vent Cover (Inside)(SF)			2.6	**[2]**
	Evap. Cooler/Air Conditioner Vent Cover (Inside) (MF)			2.6	**[2]**
6	Attic Venting	No Energy Savings			
7	a. Ceiling Insulation R11 (SF)	271.7	129.9	21.0	**[2]**
	a. Ceiling Insulation R11 (MF)	266.1	102.0	21.0	**[2]**
	b. Kneewall Insulation R11	Included in Ceiling Insulation			
	c. Ceiling Insulation R19 (SF)	271.7	129.9	21.0	**[2]**
	c. Ceiling Insulation R19 (MF)	266.1	102.0	21.0	**[2]**
	d. Kneewall Insulation R19	Included in Ceiling Insulation			
	e. Ceiling Insulation R30 (SF)	271.7	129.9	21.0	**[2]**
	e. Ceiling Insulation R30 (MF)	266.1	102.0	21.0	**[2]**
	f. Ceiling Insulation R38 (SF)	271.7	129.9	21.0	**[2]**
	f. Ceiling Insulation R38 (MF)	266.1	102.0	21.0	**[2]**
8	Low-Flow Showerhead (MF)	185.7		9.7	**[1]**
	Low-Flow Showerhead (SF)	149.0		8.7	**[1], [2]**
9	Hot Water Faucet Restrictor(SF)	72.7		3.7	**[1]**
	Hot Water Faucet Restrictor(MF)	58.3		3.0	**[1]**
10	Door Weatherstripping (SF)			2.0	**[1]**
	Door Weatherstripping (MF)	2.5	2.5	0.4	**[1], [2]**
11	Water Heater Blanket (SF)	251.0		13.0	**[1]**
	Water Heater Blanket (MF)	202.0		12.0	**[1]**
12	Water Heater Pipe Wrap (SF)	53.0		3.3	**[2]**
	Water Heater Pipe Wrap (MF)	53.0		3.3	**[2]**
13	Duct Wrap (SF)	124.0	124.0	3.5	**[3]**
	Duct Wrap (MF)	93.0	93.0	2.6	**[3]**

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CEC Forecasting Climate Zones: 13

	DEPARTMENT OF COMMUNITY SERVICES AND DEVELOPMENT 2001 CALIFORNIA LIHEAP	CSD Energy Savings Per Measure Electric Impact (kWh)		Per Measure Gas Impact (Therms)	Source
		SH	AC		
14	Switch/Outlet Gaskets (SF)		0.8	0.8	[1], [2]
	Switch/Outlet Gaskets (MF)			0.8	[1], [2]
15	Caulking. Per Dwelling (SF)	5.1	5.1	1.7	[1], [2]
	Caulking. Per Dwelling (MF)	4.6	4.6	0.4	[1], [2]
16	Other Weatherstripping (SF)	2.7	2.7	2.0	[1], [2]
	Other Weatherstripping (MF)	2.5	2.5	0.6	[1], [2]
17	**Electric Base Load Measures:**				
	a. Refrigerator Replacement (SF)	355			[1]
	a. Refrigerator Replacement (MF)	315			[1]
	a. Refrigerator (2nd Removed)	1077			[3]
	b. Electric Water Heater Repair	No Energy Savings			
	b. Electric Water Heater Replacement	129			[1]
	c. Microwave Oven (New)	273.3		28.8	[3]
	c. Microwave Oven (Replacement)	kWh difference between old and new			[5]
	d. Thread-based Compact Fluorescent Lamps	kWh difference between old and new			[5]
	e. Hard-Wired Compact Fluorescent Lamps	kWh difference between old and new			[5]
	OPTIONAL MEASURES				
1	Ceiling Fans(SF)		165.0		[3]
	Ceiling Fans (MF)		165.0		[3]
2	Evaporative Cooler Repair (SF)		177.6		[2]
	Evaporative Cooler Repair (MF)		177.6		[2]
3	Filter Replacement for A/C or Furnace, Filters Only (SF)		4.9	1.1	[2]
	Filter Replacement for A/C or Furnace, Filters Only (MF)		3.8	0.1	[2]
4	Filter Replacement for A/C or Furnace, Filters + Replacement Signal (SF)		4.9	1.1	[2]
	Filter Replacement for A/C or Furnace, Filters + Replacement Signal (MF)		3.8	0.1	[2]
5	Setback Thermostat, Per Dwelling (SF)	330.0	330.0	60.0	[2]
	Setback Thermostat, Per Dwelling (MF)	170.1	170.1	23.0	[2]
6	**Other Optional Measures**				
a.	Floor Insulation (+36") Clearance			29.6	[1]
	Floor Insulation (-36") Clearance			29.6	[1]
b.	Electric Water Heater Timer (SF)	1.0	1.4		[3]
	Electric Water Heater Timer (MF)	2.0	2.5		[3]
c.	Shadescreen (SF)				[1]
	Shadescreen (MF)				[1]
d.	Shutters (SF)				[1]
	Shutters (MF)				[1]

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	DEPARTMENT OF COMMUNITY SERVICES AND DEVELOPMENT 2001 CALIFORNIA LIHEAP	CSD Energy Savings			
		Per Measure Electric Impact (kWh)		Per Measure Gas Impact (Therms)	
		SH	AC		Source
e.	Storm Window --Operable(Vinyl, Polycarb, Glass), Fixed (SF)				[1]
	Storm Window --Operable(Vinyl, Polycarb, Glass), Fixed (MF)				[1]
f.	Tinted Film (SF)		0.3	143.7	[1]
	Tinted Film (MF)		0.2	40.6	[1]
g.	Wood Fueled Space Heater(SF)	984.0		175.5	[3]
	Wood Fueled Space Heater(MF)	775.0		107.0	[3]

Legend:
SH - Space Heating
AC - Central Air Conditioning
SF - Single Family
MF - Multi Family

[1] Joint Utility Low Income Energy Efficiency Program Costs and Bill Savings Standardization Report, March 5, 2001

[2] 2001 DEER Update Study
[3] RHA Estimate
[4] Residential Energy Survey Report, 1994
[5] Calculation using kWh difference between old and new unit

Appendix C

Number of Homes Weatherized and Estimated Yearly Energy Savings per CAL LIHEAP Service Provider

#	CAL LIHEAP Weatherization Agency	Number of Dwellings Per Month					Total Number of Dwellings	Estimated Yearly Energy Savings		
		June	July	Aug.	Sept.	Oct.		Measure Qty	kWh	Therms
1	Amador-Tuolumne Community Action Agency		14	37	48	49	148	1265	133117	2992
2	California Human Development Corp.		16	64	4	8	92	1408	54900	6004
3	Central Valley Opportunity Center, Inc.	9	36	47	42	33	167	1915	127670	7568
4	City of Berkeley	12	25	27	22		86	1067	42694	3746
5	Colusa-Glenn-Trinity Community Action Agency	12	12	14	8	14	60	524	25248	1655
6	Community Action Agency of Butte County, Inc.	3	63	46	12		124	1706	159199	4503
7	Community Action Commission of Santa Barbara County			23	33	63	119	1467	57678	7789
8	Community Resource Project, Inc.	92	236				328	962	40464	3363
9	Community Services and Employment Training, Inc.	13	138	219	30	173	573	988	169525	144
10	County of Riverside, Department of Community Action			141	210	114	465	2849	293712	2203
11	Economic Opportunity Council of San Francisco	84	198	156	73	174	685	2215	197720	3985
12	El Dorado County Department of Community Services	29	40	45	56	21	191	3093	105675	6684
13	Fresno County Economic Opportunities Commission			609			609	2781	77175	13450
14	Great Northern Corporation	3	10	24	55		92	1154	38805	3511
15	Madera County Community Action Committee, Inc.		6	30	16	9	61	772	33845	1549
16	Maravilla Foundation	130					130	956	41962	1260
17	Mariposa County Human Services Department			6			6	89	7340	309
18	Merced County Community Action Agency		13	30	28	27	98	1508	80319	2845
19	Metropolitan Area Advisory Committee	59	108	99	109	104	479	5836	165864	13972
20	Nevada County Department of Housing and Community Services		11	45	43		99	698	45019	3643
21	North Coast Energy Services	36	62	235	11	11	355	2875	230569	4856
22	Orange County Community Development Council, Inc.			366	732	200	1298	2176	299962	2304
23	Pacific Asian Consortium in Employment		205	1217	167	527	2116	8773	596047	29715
24	Project Go, Inc.	6	16	61	41	40	164	1280	76275	2517
25	Redwood Community Action Agency	25	25	54	12		116	876	10250	4779
26	San Benito County Dept. of Comm. Serv. & Workforce Dev.					12	12	76	6102	202

#	CAL LIHEAP Weatherization Agency	Number of Dwellings Per Month					Total Number of Dwellings	Estimated Yearly Energy Savings		
		June	July	Aug.	Sept.	Oct.		Measure Qty	kWh	Therms
27	San Bernardino County Community Services Department	22	198	247	62		529	5904	198388	35841
28	San Joaquin County Dept. of Aging, Children's and Comm. Serv.		76	59			135	1581	59438	8986
29	Self-Help Home Improvement Project, Inc.	45	40	13	19	30	147	1562	106168	1728
30	Spectrum Community Services, Inc.		110	85	134		329	488	90825	403
31	TEACH, Inc.			18			18	18	6390	0
32	Ventura County Commission on Human Concerns	7	49	110	98	106	370	576	96560	8755
	Total Reports Analyzed	17	24	29	25	19	114	**Total Savings**	3674904	191259
	Total Number of dwellings	587	1707	4127	2065	1715	10201			